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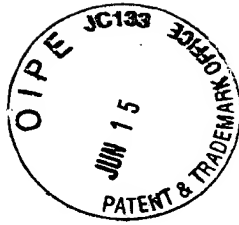
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(54) Trapezoid correction device applicable to deflecting elements of television receivers.

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(33)(32)(31) Convention priority:

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It is known that in color television receivers, the correction of trapezoidal effects in a three-gun, tricolor tube is a delicate problem if full convergence is to be achieved on the screen of the cathode ray tube.

Patent No. PV 176,196, filed on behalf of the Applicant on December 2, 1968, describes means that provide a solution to this problem by varying the current in a given portion of the deflection coil, this variation being regulated by means of an inductance or an adjustable resistance.

The present invention concerns a different solution to this problem, effected by a deliberate deformation of the magnetic field accomplished by disposing a thin layer of a suitable magnetic material (powdered iron, ferrite, for example) at a predetermined point located between the neck of the cathode ray tube and the deflector. This thin layer of magnetic material serves to modify, to some extent, the path of the lines of force in the useful portion of the electromagnetic deflection field.

The annexed figure nonrestrictively provides an embodiment of the invention.

In this figure, reference numeral 1 denotes the neck of the cathode ray tube and reference numeral 2 the deflection coil, shown in cross section and disposed at the conventional location. The usual ferrite ring surrounding the deflection coil has not been shown here.

A thin slug of divided iron 3 is inserted between the neck of the cathode ray tube 1 and the deflection coil 2. It is understood that this slug is of sufficiently reduced thickness for it to fit readily into the desired location.

In the example shown, a tab 4, advantageously of plastic, is operative to move the slug 3 manually in a plane that can be longitudinal to the neck of the tube or alternatively transverse thereto, as indicated respectively by arrows A and B.

It is understood that any other suitable means for moving the slug can be substituted for the tab 4 without departing from the scope of the invention.

It will be appreciated that the presence of the slug 3 causes deformation of the electromagnetic field that is proportionate to the volume of the slug and the permeability of the powder of which it is composed and to the position of said slug.

The deformation of the magnetic field that is effected in a variable manner in this way produces a given trapezoid that can be arranged so that it is wide at either the top or the bottom, making it possible to correct an initial trapezoid resulting either ~~from the deflector or from the~~
~~positions of the guns in the cathode ray tube.~~

It was stated in reference to the exemplary embodiment described hereinabove that the slug 3 can be moved manually by means of the tab 4. It is, of course, understood that once the type of slug 3 and its position have been determined for a given deflector or tube, it can be permanently secured in that position.

CLAIMS

1. A device for correcting the trapezoidal effect in color television receivers, characterized in that a slug of a suitable kind of magnetic material (powdered iron, ferrite, for example) is inserted between the neck of the cathode ray tube and the deflecting element so as to cause deliberate deformation of the magnetic field, having the effect of producing a trapezoid that can be arranged so that it is wide at either the top or the bottom, in order to correct an initial trapezoid resulting either from the deflector or from the positions of the guns in the cathode ray tube.

2. The device as recited in 1), characterized in that said slug of magnetic material is provided with a means for controlling appropriate movements thereof.

3. The device provided with a slug of magnetic material as recited in 2), wherein said movement-controlling means permit movement of said slug in a plane longitudinal to the neck of the cathode ray tube.

4. The device provided with a slug of magnetic material as recited in 2), wherein the movement-controlling means make it possible to move said slug in a plane of rotation transverse to the axis of the neck of the cathode ray tube.

5. A device for correcting the trapezoidal effect in color television receivers, characterized in that the slug recited in 1) is permanently secured in a predetermined position.

[At top of drawing:] PLATE 1 OF 1